

113. (Amended) Composite product according to claim 4, wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of thermoplastic polymers or elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process.

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114. (Amended) Composite product according to claim 6, wherein the thermoplastic elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process are polyethers with a molecular mass of between 200,000 and 1,000,000.

115. (Amended) Composite product according to claim 8, wherein the filler is chosen from fillers composed of active charcoal, inorganic particles or metallic particles.

## REMARKS

In response to the above-identified Office Action, Applicants amend the application and seek reconsideration thereof. In this response, Applicants amend claims 1, 4-9, 30, 33-51, 53-71, 74-92, 95-115. Applicants cancel claims 2, 3, 21, 26-29, 31, 32, 52, 72, 73, 93 and 94. Applicants do not add any new claims. Accordingly, claims 1, 4-9, 25, 30, 33-51, 53-71, 74-92 and 95-115 are pending.

Attached hereto is a marked-up version of the changes made to the claims by a current amendment. The attachment is captioned "Version With Markings To Show Changes Made."

### **I. Claim Objections**

Claims 1-9, 21 and 25-115 stand objected to because they contain the phrase "characterized in that." These claims have been amended to remove this phrase. Accordingly, reconsideration and withdrawal of the objection to claims 1, 4-9, 25, 30, 33-51, 53-71, 76-92, and 95-115 are requested.

## II. Claims rejected under 35 U.S.C. §102

Claims 1, 2, 4, 6, 8, 21, 25-31, 33, 35, 37, 38, 41-49, 51, 53, 55, 57, 58, 61, 62, 64-69, 71, 72, 74, 76, 78, 79, 82, 83, 85-91, 112, 113, and 115 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,665,442 issued to Andersen et al (hereinafter “Andersen”).

It is axiomatic that to anticipate a claim, each element of the claim must be disclosed in a single reference. In regard to claims 1, 30, 51, 71 and 92, these independent claims, as amended, include the elements of “at least one filler exhibits a specific surface greater than 300 m<sup>2</sup>/g and the mean diameter of a plurality of pores in the product is less than 0.5 μm.” However, Andersen does not teach a porous composite product exhibiting a high specific surface and containing one or more fillers in which the filler exhibits a specific surface area of 300 m<sup>2</sup>/g and the mean diameter of the pores is less than 0.5 μm. Rather, Andersen teaches a composite product consisting of a mixture of inorganic aggregates, organic polymers and fibers. The product taught by Andersen is intended to be formed in sheets having a thickness between 0.01 mm and 1 cm. See Andersen, column 19, lines 31-36. The sheets so formed are intended to be used for containers for holding food or beverage. Thus, Andersen does not teach each element of claims 1, 30, 51, 71 and 92, as amended. Therefore, these claims were not anticipated by Andersen. Accordingly, reconsideration and withdrawal of the anticipation rejection of claims 1, 30, 51, 71 and 92 are requested.

Claims 4, 6, 8, 25, 33, 35, 37, 38, 41-49, 53, 55, 57, 58, 61, 62, 64-69, 74, 76, 78, 79, 82, 83, 85-91, 112, 113 and 115 depend from independent claims 1, 30, 51 and 71 and incorporate limitations thereof. Thus, for the reasons mentioned in regards to claims 1, 30, 51 and 71, these claims are not anticipated by Andersen. Accordingly, reconsideration and withdrawal of the anticipation rejection of these claims are requested.

### **III. Claims rejected under 35 U.S.C. §103**

Claims 3, 9, 32, 39, 43, 50, 52, 59, 63, 70, 73, 80, 84, 92-95, 97, 99-101, 103-110 and 114 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Andersen. Applicants respectfully disagree for the following reasons.

In regards to claims 1, 30, 51, 71 and 92, these claims have been amended to include the elements of a porous composite product “wherein the at least one filler exhibits a specific surface greater than 300 m<sup>2</sup>/g and the mean diameter of a plurality of pores on the product is less than 0.5 µm.” The Examiner admits that Andersen is silent as to the elements of the mean diameter of the pores and specific surface range of the filler. The Examiner has argued that the discovery of optimal workable ranges for each of these elements involves only routine skill in the art and would have been obvious to one of ordinary skill in the art to optimize the size range of the pores motivated by a desire to control the porosity of the film and to optimize a specific surface range of the filler motivated by the desire to provide high initial cohesiveness of the freshly formed sheet. However, what the Examiner is actually arguing is that it would be obvious to try varying every parameter of the prior art product in order to optimize the porosity and cohesiveness of the prior art product even though the Examiner has failed to identify any part of Andersen that teaches the desirability of obtaining a specific porosity or specific surface range or how these porosity results and specific surface range are to be achieved. The “obvious to try” standard is not the appropriate standard for obviousness. See *In Re Tomlinson*, 53 CCPA 1421, 363 F.2d 928, 150 USPQ 623 (1966). Further, the Examiner fails to analyze the claim as a whole. The cited reference does not teach the combination of elements as claimed in claims 1, 30, 51, 71 and 92 because Andersen is directed to products unrelated to those to which the subject matter of claims 1, 30, 51, 71 and 92 are drawn. Andersen teaches sheets of material that can be rolled, pressed, scored, perforated, folded and glued for use in mass production of containers specifically for food and beverage containers. The requirements for such containers are very different from the combination of elements claimed in claims 1, 30, 51, 71 and 92.

The independent claims are drawn to a product with improved performance for use in the electrochemical storage of energy, such as, use in capacitors or batteries. The invention as claimed in claims 1, 30, 51, 71 and 92 is a porous composite product with a homogenous structure exhibiting a high specific surface. The product is formed of a polymeric material and is at least 20% by weight of fillers. The fillers exhibit a specific surface greater than  $300 \text{ m}^2/\text{g}$  giving to the material an open porosity and the mean diameter of the pores of the product is less than  $0.5 \mu\text{m}$ . The high specific surface of the claimed invention allows for an improved diffusion of electrolyte in the product. Moreover, having the fillers greater than 20% by weight allows a polymeric product with a high proportion of active mass and optimal accessibility to this mass to be obtained. The accessibility of the active mass is obtained by the combination of the percentage of fillers and their high specific surface (greater than  $300 \text{ m}^2/\text{g}$ ). Having the mean diameter of the pores be less than  $0.5 \mu\text{m}$  ensures a homogenous structure for the product and contributes to the accessibility of the active mass. A porous composite product with the claimed elements when used as an electrode in a capacitor allows charging and discharging of large amounts of electric charge.

In contrast, Andersen teaches away from the claimed elements of the independent claims by teaching a packaging product having a closed porosity that provides good insulation. See column 17, lines 31-33, column 27, lines 57-61 of Andersen. In order to provide good insulation, the voids created in the product of Andersen must essentially be closed voids. Consequently, those voids do not contribute to the high specific surface of the product of Andersen. Thus, Andersen teaches away from having a high specific surface such as in  $300 \text{ m}^2/\text{g}$ .

While the fillers taught by Andersen contain a high specific surface, this high specific surface is taught only to provide a high initial cohesiveness of the freshly formed sheet. See Andersen, column 6, lines 37-60. Thus, Andersen does not teach the use of a high specific surface to allow improved diffusion of an electrolyte in a product or to allow improved accessibility to an active mass. Therefore, Andersen does not teach discovering an optimum workable range for these variables. Therefore, Andersen does not teach each of the elements of claims 1, 30, 51, 71

and 92. Accordingly, reconsideration and withdrawal of the obviousness rejection of these claims are requested.

In regards to claims 9, 32, 39, 43, 50, 59, 63, 70, 80, 84, 95, 97, 99-101, 103-110, and these claims depend from the independent claims 1, 30, 51, 71 and 92 and incorporate limitations thereof. Thus, at least for the reasons mentioned in regard to the independent claims, these dependent claims are not obvious over Andersen. Accordingly, reconsideration and withdrawal of the obviousness rejection of these claims are requested.

In regards to claims 34, 54, 75, 96 and 111, these claims stand rejected under 35, U.S.C. §103(a) as being unpatentable over Andersen in view of U.S. Patent No. 5,458,836 issued to Rakestraw (hereinafter “Rakestraw”).

These claims depend from independent claims 1, 30, 51, 71 and 92 and incorporate the limitations thereof. Thus, for the reasons mentioned above in regards to those claims, Andersen does not teach each of the elements of the claims. Further, Rakestraw does not cure the defects of Andersen. The Examiner has not indicated any part of Rakestraw that teaches a porous composite product formed of a polymeric material and which is at least 20% by weight at least one filler where the fillers exhibit a specific surface greater than 300 m<sup>2</sup>/g and the pores of the product have a mean diameter less than 0.5 µm as claimed in independent claims 1, 30, 51, 71 and 92. Therefore, Andersen in view of Rakestraw does not teach each of the elements of claims 34, 54, 75, 96 and 111. Accordingly, reconsideration and withdrawal of the obviousness rejection of these claims are requested.

Claims 5, 7, 36, 40, 56, 60, 77, 81, 98 and 102 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Andersen in view of U.S. Patent No. 4,403,007 issued to Coughlin (hereinafter “Coughlin”).

Claims 5, 7, 36, 40, 56, 60, 77, 81, 98 and 102 depend from independent claims 1, 30, 51, 71 and 92 and incorporate the limitations thereof. Thus, for the reasons mentioned above in regard to these claims, Andersen does not teach each of the elements of the dependent claims. Coughlin does not cure the defects of Andersen. The Examiner has not identified any part of

Coughlin that teaches a porous composite product wherein the filler exhibits a specific surface greater than 300 m<sup>2</sup>/g and where the main diameter of the pores is less than 0.5 µm. Therefore, Andersen in view of Coughlin does not teach each of the elements of claims 5, 7, 36, 40, 56, 60, 77, 81, 98 and 102. Accordingly, reconsideration and withdrawal of the obviousness rejection of these claims are requested.

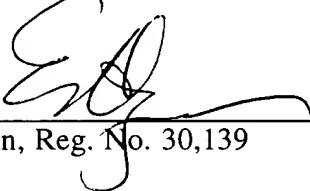
### **CONCLUSION**

In view of the foregoing, it is believed that all claims now pending, namely claims 1, 4-9, 25, 30, 33-51, 53-71, 74-92 and 95-115 patentably define the subject matter of the invention over the prior art of record and are in condition for allowance and such action is earnestly solicited at the earliest possible date. If the Examiner believes that a telephone conference would be useful in moving the case forward to allowance, the Examiner is encouraged to contact the undersigned at (310) 207-3800.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN

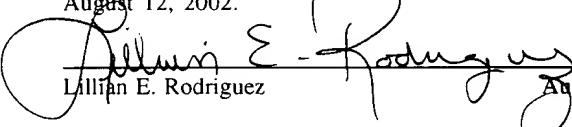
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#### **CERTIFICATE OF MAILING:**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: BOX NON-FEE AMENDMENT, Assistant Commissioner for Patents, Washington, D.C. 20231 on August 12, 2002.

  
Lillian E. Rodriguez

August 12, 2002

**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

1. (Amended) Porous composite product with a homogeneous structure, the product exhibiting a high specific surface [characterized in that it is] and being formed of a polymeric material and at least 20% by weight of [one or more] at least one filler[s and in that], the [said] product is capable of being obtained by extrusion, wherein the at least one filler exhibits a specific surface greater than 300 m<sup>2</sup>/g and a mean diameter of a plurality of pores in the product is less than 0.5 μm.
4. (Amended) Composite product according to claim 1, [characterized in that] wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of polyolefins, acrylic polymers, aromatic polymers, polyamides, polyimides, vinyl polymers with a high proportion of ethyl monomers.
5. (Amended) Composite product according to claim 4, [characterized in that] wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of polyethylenes, polypropylenes, ethylene- $\alpha$ -olefin copolymers.
6. (Amended) Composite product according to claim 4 or 5, [characterized in that] wherein the thermoplastic elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process are chosen from polyethers, poly(vinyl alcohol)s or ethylene-vinyl alcohol copolymers.
7. (Amended) Composite product according to claim 6, wherein [characterized in that] the composite product [comprises] is[: -] 10 to 40% by weight of the polyolefin material, [-] 5 to 40% by weight of the polyether, and the remainder is the at least one [-] filler[s, sufficient quantity for 100% by weight].

8. (Amended) Composite product according to claim 1, [characterized in that] wherein the filler is chosen from fillers with a high specific surface.

9. (Amended) Composite product according to claim 8, [characterized in that] wherein the at least one filler exhibits a specific surface of between 300 and 3000 m<sup>2</sup>/g.

30. (Amended) Porous composite product with a homogeneous structure, [characterized in that it is], the product being formed of a polymeric material, the product exhibiting a high specific surface and [it comprises] comprising between 30% and 85% by weight of [one or more] at least one filler[s] and [in that] the [said] product [is] being capable of being obtained by extrusion, wherein the at least one filler exhibits a specific surface greater than 300 m<sup>2</sup>/g and a mean diameter of a plurality of pores in the product is less than 0.5 μm.

33. (Amended) Composite product according to claim 30, [characterized in that] wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of polyolefins, acrylic polymers, aromatic polymers, polyamides, polyimides, vinyl polymers with a high proportion of ethyl monomers.

34. (Amended) Composite product according to claim 33, [characterized in that] wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of fluorinated polyolefins.

35. (Amended) Composite product according to claim 30, [characterized in that] wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of thermoplastic polymers or elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process.

36. (Amended) Composite product according to claim 33, [characterized in that] wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of polyethylenes, polypropylenes, ethylene- $\alpha$ -olefin copolymers.

37. (Amended) Composite product according to claim 33, [characterized in that] wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of thermoplastic polymers or elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process.

38. (Amended) Composite product according to either of claims 33, [characterized in that] wherein the thermoplastic elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process are chosen from polyethers, poly(vinyl alcohol)s or ethylene-vinyl alcohol copolymers.

39. (Amended) Composite product according to claim 38, [characterized in that] wherein the thermoplastic elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process are polyethers with a molecular mass of between 200,000 and 1,000,000.

40. (Amended) Composite product according to claim 38, wherein [characterized in that] the composite product [comprises] is [: -] 10 to 40% by weight of the polyolefin, [-] 5 to 40% by weight of the polyether, and the remainder is the at least one [-] filler[s, sufficient quantity for 100% by weight].

41. (Amended) Composite product according to claim 30, [characterized in that] wherein the at least one filler is chosen from fillers with a high specific surface.

42. (Amended) Composite product according to claim 41, [characterized in that] wherein the at least one filler is chosen from fillers composed of active charcoal, inorganic particles or metallic particles.

43. (Amended) Composite product according to claim 41, [characterized in that] wherein the at least one filler exhibits a specific surface of between 300 and 3000 m<sup>2</sup>/g.

44. (Amended) Composite product according to claim 30, wherein [characterized in that it comprises] the product includes 50 to 85% by weight of the at least one filler.

45. (Amended) Composite product according to claim 30, wherein [characterized in that it exhibits] the product exhibits a “BET” specific surface of greater than 10 m<sup>2</sup>/g.

46. (Amended) Composite product according to claim 45, wherein [characterized in that it exhibits] the product exhibits a “BET” specific surface of greater than 20 m<sup>2</sup>/g.

47. (Amended) Composite product according to claim 30, wherein [characterized in that it is] the product is provided in the form of a film.

48. (Amended) Composite product according to claim 47, wherein [characterized in that] the product in the form of a film exhibits a tensile strength at break of greater than 4 MPa.

49. (Amended) Composite product according to claim 48, wherein [characterized in that] the product exhibits a tensile strength at break of greater than 6 MPa.

50. (Amended) Composite product according to claim 30, wherein[characterized in that it is] the product is provided in the form of granules.

51. (Amended) Porous composite product with a homogeneous structure, [characterized in that it is] the product being formed of a polymeric material and at least 20% by weight of [one or more] at least one filler[s], [in that] the [said] product [is] being capable of being obtained by extrusion and [in that it exhibits a] exhibiting a high specific surface, its "BET" specific surface [of] being greater than  $10 \text{ m}^2/\text{g}$ , wherein the at least one filler exhibits a specific surface greater than  $300 \text{ m}^2/\text{g}$  and the mean diameter of a plurality of pores in the product is less than  $0.5 \mu\text{m}$ .

53. (Amended) Composite product according to claim 51, [characterized in that] wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of polyolefins, acrylic polymers, aromatic polymers, polyamides, polyimides, vinyl polymers with a high proportion of ethyl monomers.

54. (Amended) Composite product according to claim 53, [characterized in that] wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of fluorinated polyolefins.

55. (Amended) Composite product according to claim 51, [characterized in that] wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of thermoplastic polymers or elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process.

56. (Amended) Composite product according to claim 53, [characterized in that] wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of polyethylenes, polypropylenes, ethylene- $\alpha$ -olefin copolymers.

57. (Amended) Composite product according to claim 53, [characterized in that] wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of thermoplastic polymers or elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process.

58. (Amended) Composite product according to claim 53, [characterized in that] wherein the thermoplastic elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process are chosen from polyethers, poly(vinyl alcohol)s or ethylene-vinyl alcohol copolymers.

59. (Amended) Composite product according to claim 58, [characterized in that] wherein the thermoplastic elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process are polyethers with a molecular mass of between 200,000 and 1,000,000.

60. (Amended) Composite product according to claim 58, wherein[characterized in that] the composite product [comprises] is [: -] 10 to 40% by weight of the polyolefin, [-] 5 to 40% by weight of the polyether, and the remainder is the at least one [-] filler[s, sufficient quantity for 100% by weight].

61. (Amended) Composite product according to claim 51, [characterized in that] wherein the at least one filler is chosen from fillers with a high specific surface.

62. (Amended) Composite product according to claim 61, [characterized in that] wherein the at least one filler is chosen from fillers composed of active charcoal, inorganic particles or metallic particles.

63. (Amended) Composite product according to claim 61, [characterized in that] wherein the at least one filler exhibits a specific surface of between 300 and 3000 m<sup>2</sup>/g.

64. (Amended) Composite product according to claim 51, wherein[characterized in that it comprises] the product is between 30% and 85% by weight of the at least one filler.

65. (Amended) Composite product according to claim 64, wherein[characterized in that it comprises] the product is 50 to 85% by weight of the at least one filler.

66. (Amended) Composite product according to claim 51, wherein [characterized in that it], the product exhibits a “BET” specific surface of greater than 20 m<sup>2</sup>/g.

67. (Amended) Composite product according to claim 51, wherein[characterized in that it is] the product is provided in the form of a film.

68. (Amended) Composite product according to claim 67, wherein[characterized in that] the product in the form of a film exhibits a tensile strength at break of greater than 4 MPa.

69. (Amended) Composite product according to claim 68, wherein[characterized in that] the product exhibits a tensile strength at break of greater than 6 MPa.

70. (Amended) Composite product according to claim 51, [characterized in that it is] the product is provided in the form of granules.

71. (Amended) Porous composite product with a homogeneous structure, the product exhibiting a high specific surface [characterized in that it is] and being formed of a polymeric material and at least 20% by weight of [one or more] at least one filler[s], [in that] the [said] product [is] being capable of being obtained by extrusion and [in that it is] being provided in the form of a film, wherein the at least one filler exhibits a specific surface greater than 300 m<sup>2</sup>/g and a mean diameter of a plurality of pores in the product is less than 0.5 µm.

74. (Amended) Composite product according to claim 71, [characterized in that] wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of polyolefins, which are optionally fluorinated, acrylic polymers, aromatic polymers, polyamides, polyimides, vinyl polymers with a high proportion of ethyl monomers.

75. (Amended) Composite product according to claim 74, [characterized in that] wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of fluorinated polyolefins.

76. (Amended) Composite product according to claim 71, [characterized in that] wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of thermoplastic polymers or elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process.

77. (Amended) Composite product according to claim 74, [characterized in that] wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of polyethylenes, polypropylenes, ethylene- $\alpha$ -olefin copolymers.

78. (Amended) Composite product according to claim 74, [characterized in that] wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of thermoplastic polymers or elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process.

79. (Amended) Composite product according to claim 74, [characterized in that] wherein the thermoplastic elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process are chosen from polyethers, poly(vinyl alcohol)s or ethylene-vinyl alcohol copolymers.

80. (Amended) Composite product according to claim 79, [characterized in that] wherein the thermoplastic elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process are polyethers with a molecular mass of between 200,000 and 1,000,000.

81. (Amended) Composite product according to claim 79, wherein[characterized in that] the composite product [comprises] is [: -]10 to 40% by weight of the polyolefin, [-] 5 to 40% by weight of the polyether, and the remainder is the at least one [-] filler[s, sufficient quantity for 100% by weight].

82. (Amended) Composite product according to claim 71, [characterized in that] wherein the at least one filler is chosen from fillers with a high specific surface.

83. (Amended) Composite product according to claim 82, [characterized in that] wherein the at least one filler is chosen from fillers composed of active charcoal, inorganic particles or metallic particles.

84. (Amended) Composite product according to claim 82, [characterized in that] wherein the at least one filler exhibits a specific surface of between 300 and 3000 m<sup>2</sup>/g.

85. (Amended) Composite product according to claim 71, wherein [characterized in that it comprises] the product is between 30% and 85% by weight of the at least one filler.

86. (Amended) Composite product according to claim 85, wherein [characterized in that it comprises] the product is 50 to 85% by weight of the at least one filler.

87. (Amended) Composite product according to claim 71, wherein [characterized in that it exhibits] the product exhibits a “BET” specific surface of greater than 10 m<sup>2</sup>/g.

88. (Amended) Composite product according to claim 87, wherein [characterized in that it exhibits] the product exhibits a “BET” specific surface of greater than 20 m<sup>2</sup>/g.

89. (Amended) Composite product according to claim 71, wherein [characterized in that it is] the product is provided in the form of a film.

90. (Amended) Composite product according to claim 89, wherein [characterized in that] the product in the form of a film exhibits a tensile strength at break of greater than 4 MPa.

91. (Amended) Composite product according to claim 90, wherein [characterized in that it] the product exhibits a tensile strength at break of greater than 6 MPa.

92. (Amended) Porous composite product with a homogeneous structure, the product exhibiting a high specific surface [characterized in that it is] and being formed of a polymeric material and at least 20% by weight of [one or more] at least one filler[s], [in that] the [said]

product [is] being capable of being obtained by extrusion and [in that it is] being provided in the form of a granules, wherein the at least one filler exhibits a specific surface greater than 300 m<sup>2</sup>/g and a mean diameter of a plurality of pores in the product is less than 0.5 µm.

95. (Amended) Composite product according to claim 92, [characterized in that] wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of polyolefins, acrylic polymers, aromatic polymers, polyamides, polyimides, vinyl polymers with a high proportion of ethyl monomers.

96. (Amended) Composite product according to claim 95, [characterized in that] wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of fluorinated polyolefins.

97. (Amended) Composite product according to claim 92, [characterized in that] wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of thermoplastic polymers or elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process.

98. (Amended) Composite product according to claim 95, [characterized in that] wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of polyethylenes, polypropylenes, ethylene- $\alpha$ -olefin copolymers.

99. (Amended) Composite product according to claim 95, [characterized in that] wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of thermoplastic polymers or elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process.

100. (Amended) Composite product according to claim 95, [characterized in that] wherein the thermoplastic elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process are chosen from polyethers, poly(vinyl alcohol)s or ethylene-vinyl alcohol copolymers.

101. (Amended) Composite product according to claim 100, [characterized in that] wherein the thermoplastic elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process are polyethers with a molecular mass of between 200,000 and 1,000,000.

102. (Amended) Composite product according to claim 100, wherein[characterized in that] the composite product [comprises] is[: -] 10 to 40% by weight of the polyolefin, [-] 5 to 40% by weight of the polyether, and the remainder is the at least one [-] filler[s, sufficient quantity for 100% by weight].

103. (Amended) Composite product according to claim 92, [characterized in that] wherein the at least one filler is chosen from fillers with a high specific surface.

104. (Amended) Composite product according to claim 103, [characterized in that] wherein the at least one filler is chosen from fillers composed of active charcoal, inorganic particles or metallic particles.

105. (Amended) Composite product according to claim 103, [characterized in that] wherein the at least one filler exhibits a specific surface of between 300 and 3000 m<sup>2</sup>/g.

106. (Amended) Composite product according to claim 92, wherein [characterized in that it comprises] the product is between 30% and 85% by weight of the at least one filler.

107. (Amended) Composite product according to claim 106, wherein [characterized in that it comprises] the product is 50 to 85% by weight of the at least one filler.

108. (Amended) Composite product according to claim 92, wherein [characterized in that it exhibits] the product exhibits a “BET” specific surface of greater than 10 m<sup>2</sup>/g.

109. (Amended) Composite product according to claim 108, wherein [characterized in that it exhibits] the product exhibits a “BET” specific surface of greater than 20 m<sup>2</sup>/g.

110. (Amended) Composite product according to claim 92, wherein [characterized in that it is] the product is provided in the form of a film.

111. (Amended) Composite product according to claim 4, [characterized in that] wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of fluorinated polyolefins.

112. (Amended) Composite product according to claim 1, [characterized in that] wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of thermoplastic polymers or elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process.

113. (Amended) Composite product according to claim 4, [characterized in that] wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of

thermoplastic polymers or elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process.

114. (Amended) Composite product according to claim 6, [characterized in that] wherein the thermoplastic elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process are polyethers with a molecular mass of between 200,000 and 1,000,000.

115. (Amended) Composite product according to claim 8, [characterized in that] wherein the filler is chosen from fillers composed of active charcoal, inorganic particles or metallic particles.